In deference to the requirement in item 1 on page 2 of the above-mentioned Office action, the relevant part of the Milonni et al. reference is enclosed herewith. Please note that the Milonni et al. reference is a college textbook with more than 730 pages in total.

In the section entitled "Claim Rejections - 35 USC § 103" on pages 2-6 of the above-mentioned Office action, claims 1, 12 and 13 have been rejected as being unpatentable over Minoura et al. (US Pat. No. 4,253,724) in view of Admitted Prior Art of pages 7-8 (APA) under 35 U.S.C. § 103(a); claims 4, 9 and 10 have been rejected as being unpatentable over Minoura et al. in view of APA and further in view of Rothrock (US Pat. No. 3,657,510) under 35 U.S.C. § 103(a); claim 8 has been rejected as being unpatentable over Minoura et al. in view of APA and further in view of Huber (US Pat. No. 5,208,819) under 35 U.S.C. § 103(a); and claims 5-7 have been rejected as being unpatentable over Minoura et al. in view of APA and further in view of Rothrock and further in view of Haas (US Pat. No. 5,874,981) under 35 U.S.C. § 103(a).

As will be explained below, it is believed that the claims were patentable over the cited art in their original form and the claims have, therefore, not been amended to overcome the references.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claims 1, 12 and 13 call for, inter alia:

> at least one semiconductor laser being operated in multimode, being mode coupled and emitting laser radiation having ultra-short pulses with a duration of less than 1 ns; and
>
> an optical system for forming an image of the radiation from the laser on the printing plate. (Emphasis added by Applicant).

Minoura et al. disclose a recording optical system whose light source is a semiconductor laser and an optical system for focusing an image of the radiation from the laser on a recording medium. Contrary to the statement of the Examiner in the first paragraph on page 3 of the Office action, it is clearly disclosed by Minoura et al. that the semiconductor laser is a single-mode laser capable of constantly maintaining a single oscillating mode despite any external perturbations such as current fluctuations (see column 2, lines 19-24). The laser functions in single mode with an emission wavelength approximately equal to 8000 Å (see column 8, lines 26-28). There is no hint in Minoura et al. that this laser is operated in multi-mode or being mode coupled.

In the interpretation of the reference Minoura et al., the Examiner seems to rely on the background part of the specification, which refers to gas laser systems (see column

1, lines 10-25 and Fig. 1) and to semiconductor laser systems (see column 1, lines 26-47). Minoura et al. address two problems arising with semiconductor laser light sources: spot-size variations due to count variations and variations of the beam waist. Minoura et al. correctly link spot-size variations to lasing in multiple modes. What might have caused confusion is the fact that there are two different classes of modes for a laser: resonator modes (transversal modes) and frequency modes (longitudinal modes).

A laser can operate at a single frequency (in only one frequency mode) but still in several resonator modes depending on the pumping characteristics and the resonator geometry. It is evident for a person skilled in the art that in the context given by Minoura et al., the spot-size variations modes are resonator modes and not frequency modes of the laser because resonator modes have different light intensity distributions or patterns of considerably different size and, hence, lasing in different resonator modes leads to spot-size variations (see, e.g., APA and Figure 14.20 of Milonni et al.).

With these considerations in mind, it should be clear that Minoura et al. only disclose a single-mode (both transversally and longitudinally) semiconductor light source. It also must be noted that, in order to achieve single-mode operation, gain

only exists in the vicinity of one longitudinal mode (see, e.g., APA and Section 11.12 of Milonni et al.). It can be followed from this that any mode coupling of a single-mode laser will not result in emission of pulsed radiation because there is no gain at the frequencies of other longitudinal modes possibly being coupled. Please note that the more longitudinal frequencies that can be coupled, the shorter a pulse will be (see, e.g., APA and Section 12.8 of Milonni et al.). A single-mode operation, however, necessarily results in continuous-wave emission.

In conclusion, it would not have been obvious to a person skilled in the art to force a single mode semiconductor laser as disclosed by Minoura et al. to emit pulses. A mode coupling method as disclosed by APA for the purpose of emitting ultra-short pulses with a duration of less than 1 ns cannot be applied to Minoura et al. with success by a person skilled in the art.

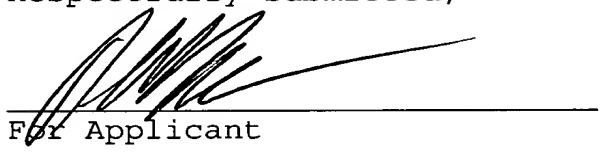
It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claims 1, 12 and 13 of the instant application. Claims 1, 12 and 13 are therefore patentable over the art. Since dependent claims 4-11 are ultimately dependent on claim 1, they are believed to be patentable as well.

In view of the foregoing, reconsideration and allowance of claims 1-13 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate a telephone call so that, if possible, patentable language can be worked out.

Please charge any fees which might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Respectfully submitted,



For Applicant

YHC:cgm

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